

**In the claims:**

1. In a radio communication system in which a mobile node selectably communicates data by way of a radio link with a network part, an improvement of apparatus for facilitating initiation of allocation of channel capacity upon the radio link, said apparatus comprising:

a channel allocation request generator selectably operable when data is available to be communicated by the mobile node to the network part, said channel allocation request generator for selectably generating a channel allocation request to communicate the data from the mobile node to the network part; and

a selector operable at least absent of detection at the mobile node of a response to an initial channel allocation request generated by said channel allocation request generator and determination that communication conditions on the radio link are inadequate, said selector for selecting when to cause said channel allocation request generator to generate at least a first subsequent channel allocation request.

2. The apparatus of claim 1 further comprising a counter coupled to receive indications when said channel allocation request generator generates a channel allocation request, said counter for maintaining a count value representative of a cumulative count of channel allocation requests generated by said channel allocation request generator to request the allocation of the channel capacity to communicate the data.

3. The apparatus of claim 2 wherein said selector is further coupled to said counter to receive the count value maintained thereat, selection made by said selector to cause

said channel allocation request generator to generate the subsequent channel allocation request selectably responsive to the count value maintained at said counter.

4. The apparatus of claim 3 wherein said selector causes said channel allocation request generator to generate the subsequent channel allocation request signal when the count value maintained by said counter is less than a selected threshold.

5. The apparatus of claim 4 wherein said selector causes said channel allocation request generator to generate subsequent channel allocation request signals at selected intervals absent detection at the mobile node of the initial channel allocation request and any prior, subsequent channel allocation requests while the count value remains less than the selected threshold.

6. The apparatus of claim 3 further comprising a radio link indicia measurer coupled to receive indicia associated with the radio link, said radio link indicia measurer for measuring a value associated with the radio link.

7. The apparatus of claim 3 further comprising a timer coupled to receive indications of when said channel allocation request generator generates a channel allocation request, said timer for timing a selected time period subsequent to the generation of the channel allocation request.

8. The apparatus of claim 1 further comprising a radio link indicia measurer coupled to receive indicia associated with the radio link, said radio link indicia measurer for measuring a value associated with the radio link, and wherein said selector is further coupled

to said radio link indicia measurer to receive the value associated with the radio link measured by said radio link indicia measurer, selection made by said selector to cause said channel allocation request generator to generate the subsequent channel allocation request selectably responsive too the value associated with the radio link.

9. The apparatus of claim 8 wherein the network part generates a broadcast signal upon a broadcast channel defined upon the radio link and wherein the indicia associated with the radio link to which said radio link indicia measurer is coupled to receive comprises indicia associated with detection at the mobile node of the broadcast signal upon the broadcast channel.

10. The apparatus of claim 9 wherein the value measured by said radio link indicia measurer comprises a signal-strength value representative of at least relative signal strength of the broadcast signal broadcast upon the broadcast channel, detected at the mobile node.

11. The apparatus of claim 10 wherein said selector selects to cause said channel allocation request generator to generate the subsequent channel allocation request signal when the value associated with the radio link, measured by said radio link indicia measurer, is beyond a selected threshold.

12. The apparatus of claim 1 further comprising a timer coupled to receive indications of when said channel allocation request generator generates a channel allocation request, said timer for timing a selected time period subsequent to the generation of the channel allocation request, and wherein said selector is further coupled to said timer to receive indications at least of time-out of the selected time period by said timer, selection made by

said selector to cause said channel allocation request generator to generate the subsequent channel allocation request selectably responsive to time-out of the selected time period by said timer.

13. The apparatus of claim 1 wherein the radio communication system defines a random access channel and wherein the channel allocation requests generated by said channel allocation request generator are generated upon the random access channel.

14. The apparatus of claim 13 wherein the radio communication system comprises a GSM (Global System for Mobile Communications) system that provides for GPRS (General Packet Radio Service) and wherein the channel allocation requests selectably generated by said channel allocation request generator are for allocation of channel capacity upon which to send GPRS-formatted data.

15. In a method of communicating in a radio communication system in which a mobile node selectably communicates data by way of a radio link with a network part, an improvement of a state transition controller method for controlling state transitions between mobile-node states pursuant to initiation of allocation of channel capacity upon the radio link, said method comprising:

placing the mobile node in a first operational state in which the mobile node is permitted to request the allocation of the channel capacity upon the radio link;  
monitoring communication indicia on the radio link;

84 placing the mobile node in a second operational state in which the mobile node  
85 remains permitted to request the allocation of the channel capacity upon the radio link  
86 responsive to indications that the communication indicia monitored during said operation of  
87 monitoring is beneath a first threshold level; and

88 placing the mobile node in a third operational state in which the mobile node is  
89 prohibited from requesting the allocation of the channel capacity if the mobile node is unable,  
90 while in the second operational state, to detect a response to the channel allocation request.

91 16. The method of claim 15 comprising the additional operations of further  
92 monitoring the communication indicia while the mobile node is in the second operational  
93 mode, and returning the mobile node to the first operational state from the second operational  
94 state responsive to indications that the communication indicia monitored during said operation  
95 of further monitoring is above a second threshold level.

96 17. The method of claim 15 wherein said operation of placing the mobile node in  
97 the third operational state further comprises the operation of maintaining the mobile node in  
98 the third operational state for a selected time period.

99 18. The method of claim 15 wherein said method comprises the additional  
100 operations of further monitoring the communication indicia while the mobile node is in the  
101 third operational mode, and returning the mobile node to the first operational state responsive  
102 to indications that the communication indicia monitored during said operation of further  
103 monitoring is above a second threshold.

104           19.     The method of claim 15 wherein said method comprises the additional  
105     operations of further monitoring the communication indicia while the mobile node is in the  
106     third operational mode, and wherein said operation of placing the mobile node in the third  
107     operational state further comprises the operation of maintaining the mobile node in the third  
108     operational state for a selected time period unless the communication indicia monitored  
109     during said operation of further monitoring is above a second threshold, and if the  
110     communication indicia monitored during said operation of further monitoring is above a  
111     second threshold, returning the mobile node to the first operational state.

112           20.     A method for facilitating initiation of allocation of channel capacity upon a  
113     radio link in a radio communication system in which a mobile node selectably communicates  
114     data by way of the radio link with a network part, said method comprising:  
115                 selectably generating an initial channel allocation request to communicate the data  
116     from the mobile node to the network part when data is available to be communicated by the  
117     mobile node to the network part; and  
118                 selecting when to cause generation of at least a first subsequent channel allocation  
119     request absent detection at the mobile node of a response to the initial channel allocation  
120     request and upon determination that communication conditions on the radio link are  
121     inadequate.